

Textiles

**1995 TRI Releases for Textile Manufacturing Facilities (SIC 22)
by Number of Facilities Reporting (pounds/year)***

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Methanol	64	212,358	2,717,312	1,764	0	0	2,931,434	45,804
Ammonia	51	137,047	1,201,243	6,911	0	0	1,345,201	26,376
Methyl Ethyl Ketone	37	1,469,884	3,450,185	250	0	1	4,920,320	132,982
Toluene	33	588,915	2,918,775	5	0	1	3,507,696	106,294
Phosphoric Acid	32	2,503	48,496	250	0	0	51,249	1,602
Chlorine	31	13,885	20,523	11,908	0	0	46,316	1,494
Antimony Compounds[M]	30	322	1,065	1,067	0	250	2,704	90
Decabromodiphenyl Oxide	26	206	1,075	1,860	0	1,754	4,895	188
Ethylene Glycol	23	5,705	131,720	9,102	0	286	146,813	6,383
Certain Glycol Ethers	21	20,329	166,765	18,651	0	0	205,745	9,797
Chromium Compounds[C, M]	20	15	18	2,712	0	1,811	4,556	228
Zinc Compounds[M]	20	2,645	6,196	480	0	5	9,326	466
1,1,1-Trichloroethane[O]	19	324,499	11,580	0	0	0	336,079	17,688
Copper Compounds[M]	18	2,199	181	10,908	0	2,789	16,077	893
Formaldehyde[C]	18	2,110	66,144	92	0	0	68,346	3,797
Xylene (Mixed Isomers)	18	103,961	740,907	750	0	0	845,618	46,979
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	17	4,451	171,436	250	0	5	176,142	10,361
Sulfuric Acid	15	250	250	0	0	0	500	33
Diisocyanates	11	1,818	1,676	0	0	0	3,494	318
n,n-dimethylformamide[C]	11	60,816	56,263	0	0	0	117,079	10,644
Biphenyl	11	6,935	147,813	762	0	0	155,510	14,137
N-methyl-2-pyrrolidone	10	65,640	324,632	34	0	0	390,306	39,031
Sodium Nitrite	9	19,033	18,005	0	0	0	37,038	4,115
Barium Compounds[M]	8	10	10	5	0	0	25	3
Trichloroethylene[C]	8	40,980	241,477	0	0	0	282,457	35,307
1,2,4-trimethylbenzene	8	6,704	44,108	3,005	0	0	53,817	6,727
Nitrate Compounds	7	0	0	187,450	0	0	187,450	26,779
Formic Acid	7	15,113	4,178	0	0	0	19,291	2,756
Dichloromethane[C]	7	79,576	434,986	0	0	1	514,563	73,509
Methyl Isobutyl Ketone	7	84,572	331,139	0	0	0	415,711	59,387
Phenol	6	6,189	86,482	0	0	0	92,671	15,445
1,2,4-trichlorobenzene	6	7,416	38,623	189	0	0	46,228	7,705
Antimony[M]	6	50	34	0	0	0	84	14
Lead Compounds[C, M]	4	5	5	5	0	0	15	4
Tetrachloroethylene[C]	4	5,818	58,166	0	0	0	63,984	15,996
Copper[M]	4	0	0	0	0	0	0	0
Cobalt Compounds[C, M]	3	0	10	590	0	0	600	200
Styrene[C]	3	63,553	47,181	0	0	0	110,734	36,911
Diethanolamine	3	0	5,696	150	0	0	5,846	1,949
Di(2-ethylhexyl) Phthalate[C]	3	0	799	0	0	0	799	266
Arsenic Compounds[C, M]	2	0	0	0	0	0	0	0
Nickel Compounds[C, M]	2	0	0	0	0	0	0	0
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	2	12,129	13,155	0	0	0	25,284	12,642
Naphthalene	2	173	8,600	7,800	0	0	16,573	8,287
Propylene	2	0	0	0	0	0	0	0
Dimethyl Phthalate	2	0	2,708	0	0	0	2,708	1,354
Lead[C, M]	2	5	5	0	0	0	10	5
Chlorine Dioxide	2	5,141	0	0	0	0	5,141	2,571
Cadmium Compounds[C, M]	1	0	0	0	0	0	0	0
Thiourea[C]	1	0	0	0	0	0	0	0
N-butyl Alcohol	1	0	50	1,900	0	0	1,950	1,950
Hydrogen Cyanide	1	250	2,566	0	0	0	2,816	2,816
Vinyl Chloride[C]	1	5	5	0	0	0	10	10
Acetaldehyde[C]	1	0	13,400	0	0	0	13,400	13,400
Trichlorofluoromethane[O]	1	250	0	0	0	0	250	250
Freon 113[O]	1	18,507	0	0	0	0	18,507	18,507
Methyl Methacrylate	1	454	1,816	0	0	0	2,270	2,270
Dibutyl Phthalate	1	40	46	0	0	0	86	86

**1995 TRI Releases for Textile Manufacturing Facilities (SIC 22)
by Number of Facilities Reporting (pounds/year)***

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
2-phenylphenol	1	0	26,240	0	0	0	26,240	26,240
Acetophenone	1	0	0	0	0	0	0	0
1,4-Dichlorobenzene[C]	1	14,665	0	0	0	0	14,665	14,665
1,2-Dichloroethane[C]	1	0	8,935	0	0	0	8,935	8,935
Maleic Anhydride	1	0	0	0	0	0	0	0
2-methoxyethanol	1	3,200	750	0	0	0	3,950	3,950
N-hexane	1	130,000	658	0	0	0	130,658	130,658
2-ethoxyethanol	1	4,800	900	0	0	0	5,700	5,700
Folpet	1	0	0	0	0	0	0	0
C.I. Basic Green 4	1	0	0	0	0	0	0	0
Toluene-2,4-diisocyanate[C]	1	0	0	0	0	0	0	0
Molybdenum Trioxide	1	750	250	0	0	0	1,000	1,000
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
1,1-dichloro-1-fluoroethane[O]	1	367,120	0	0	0	0	367,120	367,120
C.I. Disperse Yellow 3	1	349	0	0	0	0	349	349
Nickel[C, M]	1	18	0	0	0	0	18	18
Barium[M]	1	0	0	0	0	0	0	0
Chromium[M]	1	0	0	0	0	0	0	0
	339**	3,913,368	13,575,488	268,850	0	6,903	17,764,609	52,403

[C]Known or suspect carcinogens[M] Metals and metal compounds[O]Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Textile Manufacturing Facilities (SIC 22)
by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Methanol	64	110,082	0	18,123	6,111	135,698	270,014	4,219
Ammonia	51	517,662	3,849	.	1,548	2,780	525,839	10,311
Methyl Ethyl Ketone	37	4,550	27,000	280,256	324,111	775,448	1,411,365	38,145
Toluene	33	505	32,650	250	52,351	646,897	732,653	22,202
Phosphoric Acid	32	184,990	.	.	25,329	.	210,319	6,572
Chlorine	31	27,891	0	.	.	.	27,891	900
Antimony Compounds[M]	30	72,575	120,995	750	26,401	5,761	226,482	7,549
Decabromodiphenyl Oxide	26	243,056	55,546	1,993	5,434	3,300	309,329	11,897
Ethylene Glycol	23	428,068	38,000	.	.	.	466,068	20,264
Certain Glycol Ethers	21	192,060	14	.	.	9,890	201,964	9,617
Chromium Compounds[C, M]	20	52,996	3,828	750	4,615	.	62,189	3,109
Zinc Compounds[M]	20	60,950	91,231	6,830	7,787	1,213	168,011	8,401
1,1,1-Trichloroethane[O]	19	0	.	614	.	3,922	4,536	239
Copper Compounds[M]	18	18,683	9,482	2,376	1,421	.	31,962	1,776
Formaldehyde[C]	18	5,947	251	.	5,797	121	12,116	673
Xylene (Mixed Isomers)	18	58,600	.	4,800	40,755	43,330	147,485	8,194
Hydrochloric Acid								
(1995 and after "Acid Aerosols" Only)	17	66,613	50,920	.	129,493	.	247,026	14,531
Sulfuric Acid	15	1,585	.	.	29,994	.	31,579	2,105
Diisocyanates	11	0	1,300	3	386	.	1,689	154
n,n-dimethylformamide[C]	11	11,123	291	.	3,403	100,913	115,730	10,521
Biphenyl	11	239,361	.	.	.	.	239,361	21,760
N-methyl-2-pyrrolidone	10	250	1,300	72,767	13,140	94,915	182,372	18,237
Sodium Nitrite	9	128,764	.	.	.	.	128,764	14,307
Barium Compounds[M]	8	10	36,652	.	500	2,403	39,565	4,946
Trichloroethylene[C]	8	10	2,910	326,000	3,000	49,934	381,854	47,732
1,2,4-trimethylbenzene	8	44,335	1,274	.	.	.	45,609	5,701
Nitrate Compounds	7	59,671	9,332	.	.	.	69,003	9,858
Formic Acid	7	593	.	.	.	.	593	85
Dichloromethane[C]	7	5	.	240	5	18,849	19,099	2,728
Methyl Isobutyl Ketone	7	500	3,600	250	1,359	128,668	134,377	19,197
Phenol	6	0	1,566	.	459	21,841	23,866	3,978
1,2,4-trichlorobenzene	6	80,552	31,898	.	.	.	112,450	18,742
Antimony[M]	6	20,627	18,162	1,489	1,258	230	41,766	6,961
Lead Compounds[C, M]	4	257	12,450	79,500	1,010	.	93,217	23,304
Tetrachloroethylene[C]	4	10,928	2,340	.	45,327	.	58,595	14,649
Copper[M]	4	1,735	.	.	.	.	1,735	434
Cobalt Compounds[C, M]	3	858	907	.	.	.	1,765	588
Styrene[C]	3	0	.	.	177	.	177	59
Diethanolamine	3	39,979	.	.	133	.	40,112	13,371
Di(2-ethylhexyl) Phthalate[C]	3	4,500	.	.	.	19,200	23,700	7,900
Arsenic Compounds[C, M]	2	0	216	.	5	.	221	111
Nickel Compounds[C, M]	2	508	.	.	.	.	508	254
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	2	1,916	.	.	.	.	1,916	958
Naphthalene	2	0	.	.	.	.	0	0
Propylene	2	0	.	.	.	.	0	0
Dimethyl Phthalate	2	51,441	.	.	.	.	51,441	25,721
Lead[C, M]	2	5	2,758	.	.	458	3,221	1,611
Chlorine Dioxide	2	0	.	.	.	.	0	0
Cadmium Compounds[C, M]	1	0	250	.	.	.	250	250
Thiourea[C]	1	0	.	.	.	.	0	0
N-butyl Alcohol	1	0	.	.	.	.	0	0
Hydrogen Cyanide	1	0	.	.	.	.	0	0
Vinyl Chloride[C]	1	0	15,167	.	.	2,518	17,685	17,685
Acetaldehyde[C]	1	30,600	.	.	.	.	30,600	30,600
Trichlorofluoromethane[O]	1	0	.	.	.	.	0	0
Freon 113[O]	1	0	.	.	.	.	0	0
Methyl Methacrylate	1	0	.	.	.	.	0	0

**1995 TRI Transfers for Textile Manufacturing Facilities (SIC 22)
by Number of Facilities Reporting (pounds/year)***

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Dibutyl Phthalate	1	0	1,875	.	.	3,020	4,895	4,895
2-phenylphenol	1	0	.	.	.	.	0	0
Acetophenone	1	18,233	.	.	.	.	18,233	18,233
1,4-Dichlorobenzene[C]	1	0	.	.	.	.	0	0
1,2-Dichloroethane[C]	1	7,659	.	.	.	.	7,659	7,659
Maleic Anhydride	1	7,530	.	.	.	.	7,530	7,530
2-methoxyethanol	1	0	.	.	.	.	0	0
N-hexane	1	0	.	.	.	.	0	0
2-ethoxyethanol	1	0	.	.	.	.	0	0
Folpet	1	0	1,300	.	.	.	1,300	1,300
C.I. Basic Green 4	1	0	.	.	.	.	0	0
Toluene-2,4-diisocyanate[C]	1	0	.	.	5	.	5	5
Molybdenum Trioxide	1	0	2,300	.	.	.	2,300	2,300
Polychlorinated Biphenyls[C]	1	0	.	.	.	.	0	0
1,1-dichloro-1-fluoroethane[O]	1	0	.	.	.	.	0	0
C.I. Disperse Yellow 3	1	5,189	.	.	.	.	5,189	5,189
Nickel[C, M]	1	0	120	.	.	.	120	120
Barium[M]	1	5	.	750	10	.	765	765
Chromium[M]	1	1,602	.	.	.	.	1,602	1,602
	339**	2,815,559	581,734	797,741	731,324	2,071,309	6,997,667	20,642

[C]Known or suspect carcinogens[M]Metals and metal compounds[O]Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Textile Manufacturing Facilities Reporting Only SIC 22*		
Rank	Facility¹	Total Releases in Pounds
1	Gencorp, Columbus, MS**	2,761,015
2	Holliston Mills Inc., Church Hill, TN	1,755,090
3	Avondale Mills, Inc., Graniteville, SC	1,260,050
4	American & Efird Inc., Mount Holly, NC	1,070,442
5	Uniroyal Engineered Products, Stoughton, WI**	758,023
6	Textileather Corporation, Toledo, OH**	520,890
7	Athol Corporation, Butner, NC**	421,229
8	Excello Fabric Finishers Inc., Coshocton, OH	414,000
9	Shaw Ind. Inc., Dalton, GA	412,873
10	Collins & Aikman Products Company, Farmville, NC	367,120

Source: *US Toxics Release Inventory Database, 1995.*

*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities*.

**This facility manufactures coated fabrics and is classified as SIC Code 2295, Miscellaneous Textiles, Coated Fabrics -- Not Rubberized.

Ten Largest Volume TRI Releasing Facilities Reporting Only SIC 22 or SIC 22 and Other SIC Codes*		
Rank	Facility¹	Total Releases in Pounds
1	Gencorp, Columbus, MS**	2,761,015
2	Holliston Mills Inc., Church Hill, TN**	1,755,090
3	Du Pont, Old Hickory, TN	1,737,853
4	IPC Corinth Div. Inc., Corinth, MS	1,479,471
5	Avondale Mills, Inc., Graniteville, SC	1,260,050
6	American & Efird Inc., Mount Holly, NC	1,070,442
7	E.R. Carpenter Co. Inc., Riverside, CA	896,755
8	Carpenter Co., Russellville, KY	877,660
9	Reeves Intl., Spartanburg, SC	855,355
10	Carpenter Co., Richmond, VA	799,567

Source: *US Toxics Release Inventory Database, 1995.*

*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities*.

**This facility manufactures coated fabrics and is classified as SIC Code 2295, Miscellaneous Textiles, Coated Fabrics - - Not Rubberized.

¹ Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for the Textile Industry (SIC 22) as Reported within TRI*									
A	B	C	On-Site			Off-Site			J
Year	Quantity of Production- Related Waste (10 ⁶ lbs.) ^a	% Released and Transferred ^b	D	E	F	G	H	I	% Released and <u>Disposed</u> <u>Off-Site</u> ^c
			% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	
1994	57.1	7.7	23.6%	7.2%	24.0%	1.4%	3.1%	6.0%	34.9%
1995	57.6	43.0	18.6%	8.6%	30.0%	1.4%	3.6%	6.2%	33.0%
1996	55.2	N/A	21.6%	9.0%	31.2%	1.8%	2.6%	5.4%	28.3%
1997	54.5	N/A	22.3%	9.6%	30.8%	2.9%	2.3%	5.4%	26.9%
Source: <i>Toxics Release Inventory Database, 1995</i> . * Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading <i>Source Reduction and Recycling Activity</i> . ^a Within this industry sector, non-production related waste was < 1% of production related wastes for 1995. ^b Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes. ^c Percentage of production related waste released to the environment and transferred off-site for disposal.									

Five-Year Enforcement and Compliance Summary for the Textile Industry*									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	43	40	143	18	11	14	79%	21%	0.10
II	24	15	74	19	6	11	82%	18%	0.15
III	31	24	168	11	6	6	100%	0%	0.04
IV	217	160	976	13	25	46	98%	2%	0.05
V	20	15	49	24	3	4	100%	0%	0.08
VI	7	4	22	19	1	1	0%	100%	0.05
VII	1	1	4	15	0	0	0%	0%	--
VIII	0	0	0	--	0	0	0%	0%	--
IX	9	6	17	32	0	0	0%	0%	--
X	3	2	12	15	1	1	0%	100%	0.08
TOTAL	355	267	1,465	15	53	83	90%	10%	0.06

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.